Human Resource Management Application

Software Requirement Specification (SRS) Document

Sprint 2 Implementation

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1. Introduction: -

The introduction of the software requirement specification provides an overview of the entire software. The entire SRS with overview description purpose, scope, tools used and basic description. The aim of this document is to gather, analyze and give an in-depth insight into the complete exam center assignment application by defining the problem statement in detail. The detailed requirements of the exam center assignment application are provided in this document.

1.1 Purpose: **-** The purpose of this document is to show the requirements for the human resource management application, in which the HR team can assign employees to project and manage the projects as they progress.

1.2 Intended Audience: - This document is intended to be read by the client.

1.3 Intended Use: -

- Development Team
- Maintenance Team
- Clients

Since this a general-purpose software any one can access it.

1.4 Scope: - This project aims to enable ease in management for the HR team in managing employees and projects. Each employee has entries with certain attributes, vis-à-vis projects also have attributes with which they are stored. The application has the ability to allocate and deallocate employees from projects. Therefore, the HR team can use this app to assign and dismiss employees from projects.

2. Overall Description: -

It is a HR management application. The application is a **menu driven program** which makes it easy for the user to navigate and perform functions. The user can store employee details with various attributes for easy identification such as first name, last name, contact number, business unit, practice, educational qualification, area of

expertise et cetera. Likewise, the project details are also stored with details such as projectID, description, client name, timeline, priority et cetera.
The user can update the progress of the project with time and allocate/deallocate employees based on need.
Each bit of data is validated at the time of entry and stored; invalid entries are stored in a separate file before giving the error of an 'Invalid entry" to the user.
Furthermore, the application has the capability to generate the following reports:

- List of employees assigned to project with given project ID.
- List of projects to which employee with given Emp ID is allocated.
- List of priority 1 project which are "in-progress" (today's date < end date of project)
- List of employees having given "area of expertise"

2.1 Assumptions and Dependency: -

- System should have Ubuntu Linux installed.
- System should have either 4GB or more RAM.
- The service is used preferably on a desktop or laptop.

3. System Features and Requirements: -

3.1 Functions: -

3.1.1 addEmp(): This function is used to enter the details of employees and save it in the database. The user can enter various details pertaining to the employee such as first name, last name, contact number, business unit, practice, qualification and area of interest. Once the user enters these details, they are saved in a file separated by a file separator symbol("|")..

3.1.2 addProj(): This function is used to enter the details of projects and save it in the database. The user can enter various details pertaining to the project such as project type, job description, client name, start date, end date, profit center, number of employees required and priority.

The user can enter the type of project in this function such as banking or telecom to better know the project type.

3.1.3 loadEmp(): This function loads the entries from the "employees" file and displays the data on the console for the user to inspect. The function is automatically called each time a user chooses to update menu selections.

3.1.4 loadProj(): This function loads the entries from the "projects" file and displays the data on the console for the user to inspect. The function is automatically called each time a user chooses to update menu selections.

3.1.5 updateEmp(): This function helps the user to update the existing details of an employee. It is a menu-driven application that checks if a given employee is present or not; in case it is present the user is allowed to change details of the said employee. If the user doesn't exist, then they will be shown an error.

3.1.6 deleteEmp(): This function is used to delete an employee from the employee file.

On entering the EmployeeID,, if the employee is not present, the application shows an error to the user.

If the employee exists, then the application checks if the employee is assigned to any project. The employee who is still assigned to a project cannot be deleted; hence an error is shown to the user stating this condition.

If an employee is not assigned to any project, then their entry will be successfully deleted.

3.1.7 updateProj(): This function helps the user to update the existing details of a project. It is a menu-driven application that checks if a given project is present or not; in case it is present the user is allowed to change the details of the project. If the project doesn't exist, then they will be shown an error.

The details of the project can only be updated until the project end date hasn't passed. If the user wants to update the project details after the project end date then the application shows an error.

3.1.8 deleteProj(): This function is used to delete a project from the project file.

On entering the ProjectID, if the project is not present, the application shows an error to the user.

If the project exists, then the application checks if any employee is assigned to the said project. Deletion of project is not allowed if an employee is assigned to it. In this scenario, the application shows an error to the user displaying the appropriate message.

If no employee is assigned to a project, then the project will be successfully deleted.

3.1.9 allocate(): This function is used to assign projects to employees based on the requirements stored by the user. The function doesn't allow the user to assign more employees than stated in the requirements for the project. It also ensures that not more than 3 projects are assigned to each employee. Appropriate errors are shown to the user for each condition that the allocation definition doesn't meet. Successful allocation is done if all the conditions are met.

3.1.10 deallocate(): This function is used to deallocate an employee from a project for whatever reason the user deems fit. The user enters the employeeID of the employee they wish to free from a project. If the employee is assigned to a project, then they are deallocated form it. Otherwise appropriate message is displayed to the user.

3.1.11 validDate: This function is used to stop the erratic input of date in various files. The function displays and error message for any input except the widely accepted format of DD/MM/YYYY.

3.1.12 validNames(): This function is used to make sure that only alphabets are given in certain fields. It ensures the correct structure and functioning of the application and prohibits user from entering inconsistent values.

3.1.13 listEmpGPid (): This simple function is used to generate a report that has the information of all the employees that are assigned to a projectID. The user enters the projectID for which they seek a report of the employees assigned.

3.1.14 listProjectGEid(): This simple function is used to generate a report that has the information of all the projects that are assigned to an employee. The user enters the EmployeeID for which they seek a report of the projects assigned.

3.2 System Requirements: -

3.2.1. Tools to be used:

- System Programming
- Linux
- C++ Programming
- C++ File Handling
- Valgrind
- STL library
- OOPS
- make

3.3 System Features: -

- Supportability: The application supports Windows XP and above.
- Design Constraints: The system is built using only CPP language.
- Usability: The application is to be used by the HR department to enter, maintain and regularly update the employees and project data. They can use this app to allocate and deallocate employees and project as per the need and requirement of the company.
- Reliability and availability**:** The system is available 24/7 and its design is very intuitive and simple to use even for the most basic computer user.
- Performance: The system will work on the user's terminal**.**